

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently amended) A racket comprising:

a racket frame comprising a racket handle portion orientated along a longitudinal axis of the racket, a racket head portion allowing for the attachment thereto of generally longitudinally directed strings and generally laterally directed strings to form a string bed of the racket, and a racket throat area joining the handle portion with the head portion; and

a self-powered piezoelectric damping system comprising two transducer elements laminated to the racket frame and at least one first circuit located within the racket handle portion and electrically connected to the transducer elements by way of a Y-shaped flex circuit, the first circuit including at least one storage element configured to store power extracted from the two transducer elements;

wherein stored power is supplied back to the transducer elements, and all electrical power supplied to the transducer elements is derived from power extracted from mechanical deformation of the racket; and

wherein the transducer elements convert said electrical power to mechanical power, said mechanical power being adapted to actively stiffen said racket.

2. (Canceled)

3. (Previously Presented) The racket of claim 1, wherein at least one of the transducer elements is located at the racket throat area.

4. (Currently amended) The racket of claim 3, wherein the transducer elements are located at the racket throat area and electrically connected to the first circuit.

5. (Previously Presented) The racket of claim 1, wherein the racket further includes a protective coating covering at least one of the transducer elements.

6. (Currently amended) A racket comprising:

a racket frame comprising a racket handle portion orientated along a longitudinal axis of the racket, a racket head portion allowing for the attachment thereto of generally longitudinally directed strings and generally laterally directed strings to form a string bed of the racket, and a racket throat area joining the handle portion with the head portion;

a self-powered piezoelectric damping system comprising two transducer elements laminated to the racket frame and at least one first circuit located within the racket handle portion and electrically connected to the transducer elements by way of a Y-shaped flex circuit; and

at least one storage element configured to store power extracted from the two transducer elements,

wherein the racket handle portion includes a slot in the racket handle portion and the first circuit is affixed within the slot;

wherein stored power is supplied back to the transducer elements, and all electrical power supplied to the transducer elements is derived from power extracted from mechanical deformation of the racket; and
wherein the transducer elements convert said electrical power to mechanical power, said mechanical power being adapted to actively stiffen said racket.

7. (Original) The racket of claim 6, wherein the slot extends completely through the racket handle portion.
8. (Original) The racket of claim 6, wherein the slot is at least partially filled with a foam to fix the circuit within the slot.
9. (Original) The racket of claim 6, wherein the circuit includes a circuit board and the circuit board is affixed to the racket handle portion.
10. (Original) The racket of claim 1, wherein the circuit is affixed to an end cap of the racket and the end cap is affixed to the racket handle portion.
11. (Currently amended) A racket comprising:

a racket frame comprising a racket handle portion orientated along a longitudinal axis of the racket, a racket head portion allowing for the attachment thereto of generally longitudinally directed strings and generally laterally directed strings to form a string bed of the racket, and a racket throat area joining the handle portion with the head portion;

a self-powered piezoelectric damping system comprising two transducer elements and at least one first circuit located within the racket handle portion and electrically connected to the transducer elements by way of a Y-shaped flex circuit; and a storage element configured to store power extracted from the two transducer elements;

wherein stored power is supplied back to the transducer elements, and all electrical power supplied to the transducer elements is derived from power extracted from mechanical deformation of the racket; and

wherein the transducer elements convert said electrical power to mechanical power, said mechanical power being adapted to actively stiffen said racket.

12. (Previously Presented) The racket according to claim 1, wherein the two transducer elements include piezoelectric fibers.

13. (Previously Presented) The racket according to claim 6, wherein the two transducer elements include piezoelectric fibers.

14. (Previously Presented) The racket according to claim 11, wherein the two transducer elements include piezoelectric fibers.